Seeking Observational Seismologist for Geothermal Exploration and Development

Overview

Geothermal energy is the heat below our feet that's stored in rock and circulated by fluids. In special geologic cases, that heat is highly concentrated at shallow depths in high enough quantities (think of the Old Faithful Geyser at Yellowstone National Park) that it can be tapped for power generation. The US Department of Energy projects that with the right technology improvements, geothermal electricity generation could grow more than 26-fold by 2050, but highlighted the critical need for new geoscience, data science and seismology tools in order to do so. At Zanskar, we're laser focused on this challenge—developing and commercializing new technologies to make geothermal scalable and a vital contributor to a fully carbon-free grid. And we're growing our team to better meet the opportunity.

Zanskar Background

Zanskar is a geothermal technology company accelerating the transition to carbon-free electricity generation by identifying and characterizing new geothermal resources for development. Zanskar does this by combining big data, machine learning, subsurface modeling, advanced seismic imaging, and a highly cross-functional team to build a next-generation suite of tools to discover new resources and de-risk their development. Zanskar is based in the Salt Lake City, UT metro area and provides services to and partners with independent geothermal power plant developers and operators and private equity investors. Zanskar has received financial backing from leading hardtech investors, including Prime Impact Fund, Lowercarbon Capital, Safar Partners, and First Star Ventures, and is supported by Research Fellowships at the Lawrence Berkeley National Laboratory, with funding from the U.S. Department of Energy's Geothermal Technologies Office.

Position Available

Zanskar has an opportunity for an Observational Seismologist with interests in array processing, imaging, inversion and tomography using high-frequency, large-N seismic array
datasets. Several large-N seismic arrays have been deployed across operating geothermal fields in recent years, allowing high-resolution, full-wavefield sampling of short and long duration (i.e., impulsive and emergent) signals sourced from complex structures and fluid-rock interactions that control geothermal resources. The Observational Seismologist will make use of these data and modern computational methods to apply existing and build new tools to better image and model such resources.

**Required and Preferred Qualifications**

Candidates must hold a PhD in geophysics or a related field by the time of hire. The successful applicant should have experience with signal processing, seismic data imaging and inversion, a strong record of peer-reviewed publication or equivalent industry experience and demonstrated capability of independent research and productivity.

In addition, ideal candidates will have the following qualifications:

- Required: Extensive experience in one or more of the following disciplines: exploration seismology (e.g., reflection), earthquake seismology (local, regional or global), or non-earthquake seismology (e.g., ETS, tremor, or ambient noise).
- Required: Experience in building novel tools with one or more of the following: array processing (e.g., interferometry, association), denoising (e.g., time-frequency), inversion (e.g., moment tensor), tomography and detection (e.g., template matching or machine learning detector), wavefield modeling.
- Required: Strong ability to program using python, Matlab, and unix shell scripting.
- Required: Fluent in English and excellent oral and written communication skills.

**Location**

We'd love to have you based in Utah with the rest of us, but this role is open to remote candidates with required periodic travel to our headquarters in Utah.

**How to Apply**

Please submit a brief cover letter and CV/resume to careers@zanskar.us. Please direct any questions to joel@zanskar.us.

**Equal Opportunity Employer**

Zanskar is an equal opportunity employer and complies with all applicable federal, state, and local fair employment practice laws.